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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,449	07/12/2004	Brian H. Welker	716919.78	4448
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BLACKWELL SANDERS PEPER MARTIN LLP 720 OLIVE STREET SUITE 2400 ST. LOUIS, MO 63101			EXAMINER VERBITSKY, GAIL KAPLAN	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/710,449

Applicant(s)

WELKER, BRIAN H.

Examiner

Gail Verbitsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is finally objected to because of the following informalities: "the selective movement" in line 12 and "a conduit" in line 16 lack antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman (U.S. 4595300) in view of Nimberger et al. (U.S. 6352361) [hereinafter Nimberger] and Deak et al. (U.S. 5662418) [hereinafter Deak].

Kaufman discloses in Fig. 1 a probe device/ insertable temperature probe for use in measuring temperature of fluid in a conduit, said probe device comprising a temperature sensor (thermocouple) device having a sensing element (hot junction), a portion of the sensor (thermocouple wires) is adapted to transmit a signal indicative of a temperature of the fluid (hydrocarbon) in the conduit 11. The device also comprises a carrier (thermocouple sheath protecting/ covering the sensing element and the thermocouple wires) for insertion into a flow stream in the conduit 11. The moving mechanism 20, 21, etc., Fig. 1, acting as at least one member for limiting the selective

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movement of the carrier and means for selectively moving the carrier and limiting the selective movement. In addition, there is a connector (holder 14 and chain/ driving belt 13) for associating (connecting) the carrier (thermocouple sheath) with means (moving mechanism 20, 21, etc) to selectively move the carrier between extended and retracted (raised and lowered) positions when the device is mounted to the conduit. The device also comprises means (well) 12 for mounting the probe device on the conduit 11.

For claim 2: the sensor (hot junction, wires) is within the carrier (thermocouple sheath).

For claim 8: the hot junction is a sensing element.

Kaufman does not explicitly teach that the sensor is removably mounted to the carrier with a seal and a flow director, as stated in claim 1, with the remaining limitations of claims 1-8.

Nimberger discloses a device in the field of applicant's endeavor wherein, as shown in Fig. 6 a temperature sensor device 28D in a carrier including structures 40D, 63D, 80D. The carrier includes a tubular rod with a sidewall defining a bore. It is inherent, that the tubular rod faces to both, upstream and downstream. The temperature sensing device 28D is sealed to the carrier by means of threads on its outer perimeter and threads of the carrier inner perimeter, and thus, is removable from the carrier. As becomes clear from Fig. 6, the seal prevents flow of fluid between the carrier and the temperature-sensing device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Kaufman, so as to have the sensing element and the thermocouple wires (at least a portion of the sensor) to be

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removably mounted to the carrier, as taught by Nimberger, so as to allow the operator to replace the thermocouple, if it becomes necessary without damaging the device.

Deak discloses in Figs. 1, 5 a probe device comprising in the field of applicant's endeavor comprising a flow director/ openings/ channels 14/15 on the rod 11b of the carrier 11, so as the fluid flow flows around the thermocouple (hot junction). This would imply, that depending on the positioning (aligning the flow channels with the direction of the fluid flow), the carrier within the conduit, the flow director with its first opening (on one side of the flow channel 14/ 15) would face the upstream of the fluid flow. Then a second opening (on the other side of the flow channel 14/ 15) will face the downstream of the fluid flow.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Kaufman, so as to add flow director openings to the carrier, as taught by Deak, so as to provide direct contact of the sensing element with the flow, in order to achieve more accuracy in measurements.

4. Claim 9 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman, Nimberger and Deak as applied to claims 1-8 above, and further in view of Schultz et al. (U.S. 4493159) [hereinafter Schultz].

Kaufman, Nimberger and Deak disclose the device as stated above.

They do not teach that the connector could be moved by a selectively movable piston element, as stated in claim 9.

Schultz teaches in Fig. 2 a selectively movably controllable piston element 56 moving a drive belt 50.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Kaufman, Nimberger and Deak so as to replace computer responsive motor with a movable controllable piston, because both of them are alternate types of devices providing movement of the drive belt, if one is replaced with the other.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Kaufman, Nimberger and Deak, so as to use a selectively movable piston element to move drive belt, as taught by Schultz, because it is very well known in the art to use pistons for selective repetitive movement.

Response to Arguments

5. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection necessitated by the present amendment.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Cortes U.S. 4830515 discloses in Fig. 3a device comprising a thermocouple 24b within a carrier 110, wherein the thermocouple is attached/ sealed to the carrier by means of a threaded seal device 110b on its outer diameter and a threaded seal on the carrier inner diameter. As becomes clear from Fig. 3a, the seal prevents flow of fluid between the carrier and the thermocouple. The thermocouple is removable from the carrier. The carrier 110, along with the thermocouple 24b can be selectively moved up or down within a conduit 120 by simply moving its position on a threaded connection 122.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication should be directed to the Examiner Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky

Primary Patent Examiner, TC 2800



May 10, 2005